

Small Business Economic Impact Statement for Automatic Smoke Detection and Manual Fire Alarm Systems in I-4 Childcare Occupancy Facilities

Prepared by State Building Code Council Department of General Administration

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#### **Executive Summary**

This report is focused solely on I-4 facilities, which currently make up a relatively small percentage of the population among licensed childcare business providers. These facilities accept children from birth to 30 months (2 ½ years old). The Washington Department of Early Learning (DEL) is responsible for the licensing and regulation of these facilities. According to current data, there are 23 of these facilities licensed in the state, with an average capacity of 15 to 16 children. Although other licensed facilities may accept children in this age group, there is no accurate way to assess how many of those facilities have been deemed as an I-4 occupancy category for that separate area. The State Fire Marshal's Office estimates that there are approximately 20 to 30 permit applications per year for I-4 childcare facility occupancies.

The 2009 Fire Code and Building Code, Section 907/Fire Alarm and Detection Systems establishes requirements for fire alarm systems and related components for new buildings and structures. For all Group I occupancies, the requirements include a manual fire alarm system that activates the occupant notification system. For Group I-1, I-2 and I-3, the requirements also include an automatic smoke detection system that activates the occupant notification system. Group I-4, Child Care Centers is not currently covered under this section requiring automatic smoke detection components. The proposed rule would modify the existing requirement for automatic smoke detection components that activate the occupant notification system to include the I-4 Child Care Centers.

#### Impact on small business

The proposed rules would result in some minor to moderate cost increases to child care businesses which build new buildings that are classified as I-4. Remodeling projects at existing facilities could also trigger the requirement, depending on the scope and nature of the project. The cost would depend on the size of the facility, the system design, and the number of alarms and other equipment needed. It is estimated that the additional smoke alarm requirements would add approximately \$900 to the cost of the currently required manual fire alarm system of approximately \$7500. These estimates are based on a hypothetical 1900 sq. ft. new facility.<sup>2</sup> For existing I-4 centers there would be no cost, as the requirements would not be retroactive.

The impact on business would be neutral overall, with some positive benefits for alarm installation companies in instances where new or remodeled facilities are located. There would be no cost to current child care establishments, unless they choose to remodel or build new facilities.

<sup>1</sup> Washington Department of Early Learning, 7/18/11 WA Childcare Centers data spreadsheet: Licensed and Exempt.

<sup>&</sup>lt;sup>2</sup> Per Pacific Fire & Security, Inc., Seattle WA., 8/2/11 Estimate assumed total cost for the alarm system in a new facility to be \$8,639 including \$7,751 to meet current requirements and an additional \$888 to meet the requirements under the proposed rules.

#### Section I: Introduction/Compliance with the Proposed Rules

#### How will the proposed rules compare to current rule requirements?

The proposed rules regarding installation of automatic smoke detection and full manual fire alarm systems in I-4 Childcare settings will modify the Washington State Building Code and Fire Code.

Under the current rules, compliance with the Building Code (WAC 51-50) and Fire Code (WAC 51-54) Section 907 Fire Alarm and Detection Systems is required as follows:

- ❖ According to Section 907.2 in both codes an approved fire alarm system 'shall be provided in new buildings and structures...'
- \* Existing facilities would not be affected unless they choose to remodel those facilities or construct new buildings.

Chapter 2/Definitions/Occupancy Classifications of the 2009 IFC, a Washington State amendment pertaining to child care facilities sets out the following definition:

**Child care facility.** Child care facilities that provide supervision and personal care on less than a 24-hour basis for more than five children 2-1/2 years of age or less shall be classified as Group I-4.

#### **Exceptions:**

- 1. A child day care facility that provides care for more than five but no more than 100 children 2 1/2 years or less of age, where the rooms in which the children are cared for are located on a level of exit discharge serving such rooms and each of these child care rooms has an exit door directly to the exterior, shall be classified as Group E.
- 2. Family child day care homes licensed by Washington State for the care of 12 or fewer children shall be classified as Group R-3.

Similarly, in Chapter 3/Use and Occupancy Classification of the 2009 IBC, a Washington State amendment to Section 308.5/Group I-4 day care facilities, defines a child care facility as follows:

**308.5.2** Child care facility. A facility that provides supervision and personal care on a less than 24-hour basis for more than five children 2-½ years of age or less shall be classified as Group I-4.

#### **Exceptions:**

1. A child day care facility that provides care for more than five but no more than 100 children 2-½ years or less of age, where the rooms in which the children are cared for are located on the level of exit discharge serving such rooms and each of these child care rooms has an exit door directly to the exterior, shall be classified as Group E.

2. Family child day care homes licensed by the Washington State Department of Early Learning for the care of twelve or fewer children shall be classified as Group R-3.

#### Who is required to comply with the Proposed Rules?

Under the current rules, if childcare facilities are located on a level of exit discharge, they are classified as Group E in both the Fire Code and the Building Code, and the proposed rules would not affect them. Similarly, if the childcare facilities are located in a private home they are classified as Group R-3. Thus, the I-4 classification is limited to those situations where care is provided on a level other than the level of exit discharge, and/or where care is provided in non-residential settings.

Adherence with the proposed rules would only be required for new construction of I-4 facilities, or for remodeling of existing facilities that are classified as I-4. The effective date of the proposed rules for new I-4 classified facilities would be by July 1, 2012, after the next session of the Washington State Legislature, pending the outcome of any modifications adopted during that session.

To comply with these rules, owners of new or remodeled I-4 childcare occupancies will need to:

- assess how many smoke alarms are needed;
- determine installation methods and contract for appropriate services;
- budget for the installation of the smoke alarm systems;
- order and pay for smoke alarms, keep records, and ensure proper maintenance;
- educate staff and hold necessary drills.

### **Section II: Compliance Costs for Washington Businesses**

#### **Alarm System Cost:**

Alarm costs to meet the new requirements would be incremental costs based on the size of the system. For an entire system that includes all requirements of the current rules, plus the cost of the smoke alarms in the proposed rules the estimated total is \$8,639, including the following components:

1	Fire alarm panel			
1	Lot of programming			
1	Heat			
8	Smokes (assuming that everything above the drop ceiling is properly sprinklered)			
4	Sprinkler points (waterflow, tampers, etc.)			
3	Pulls			
7	Horn/strobes			
1	Exterior bell/strobe			
1	Remote annunciator			
1	Lot of engineering (plans/submittals)			
1	Lot of permits (fire & electrical)			
1	Pretest			
1	Final test			
1	Lot of wire at about 30 cents a foot (expensive right now)			

The cost of the system without the smoke alarm requirements would be \$7,751. The incremental cost of adding the smoke alarms is \$888. This estimate is based on a model 1900 sq. ft. new facility and reflects the cost to install the system, and includes all labor related costs, equipment, supplies, and taxes (see footnote 2, above).

## **Section III: Analysis of Proportionate Impact on Small Businesses**

Small Businesses Impacted by Alarm Rules				
TYPE OF BUSINESS	NUMBER AFFECTED	ANTICIPATED IMPACTS		
I-4 childcare centers	0 to $30^3$	Minor to moderate – additional cost for new smoke alarm requirements.		
Alarm Systems – electric/installation	0 to 30 <sup>4</sup>	Neutral to Positive: Installation of smoke alarm systems in new construction or remodeling projects		

# The impact on small businesses compared to the largest businesses in the state will not be disproportionate.

- The impact on the childcare industry will be minor to moderate.
- The impact on the alarm industry will be minor, but positive.

<sup>&</sup>lt;sup>3</sup> Dependent on the number of permit applications approved for new I-4 facilities.

<sup>&</sup>lt;sup>4</sup> Dependent on the number of contracts established to install system components in new or remodeled I-4 facilities.

#### **Section IV: Small Business Involvement and Impact Reduction Efforts**

#### Actions Taken to Reduce the Impact of the Rule on Small Businesses

As written, the proposed rules would have minor impacts on small businesses in the childcare and alarm industries; no specific action was required to mitigate these potential impacts.

#### Involvement of Small Business in the Development of the Proposed Rules

The Fire Code Technical Advisory Group members brought expertise in fire and emergency response; the alarm industry was consulted by the proponent to obtain estimated cost impacts.

#### Section V: Jobs created or lost as a result of these Rules:

These rules are unlikely to impact job creation, as they will not result in additional contracts for alarm installation. They will simply gain a few hours of additional work when a contract is signed for installation of a system in new I-4 construction. For remodeling projects, there may be only a need to add the smoke alarms required under the current rules to an already existing system. This would not result in additional jobs, but would require a short term contract to upgrade the system by a qualified alarm technician. These proposed rules would not have a significant impact on the alarm industry and would not affect employment rates in the construction industry. For the childcare industry the impact on jobs would be neutral, with no loss or gain anticipated as a result of these proposed rules.

APPENDIX 1: Plan for Model 1900 sq. ft. I-4 Childcare Facility

